DATA COMMUNICATION PROJECT REPORT

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OVERVIEW

1. Project Background and Description

This project is an attempt to make line encoding and scrambling of signal easy to visualize. It plots encoded and scrambled signal according to type of encoding and scrambling that we choose. It offers variety of line encoding schemes & scrambling options.

A random binary stream is generated and then fed to various functions for the plotting of graph .We can generate completely random binary sequence or random binary sequence with fixed subsequence of 4 or 8 zeros.

Note: In case of scrambling, it is advised to choose binary subsequence with fixed subsequence of zeros.

2. Language and Libraries

Language: The coding part for this project has been done in C++ language .C++ is preferred for it's speed and is beneficial in competitive programming point of view.

Library: This project required to plot graphs. Graphics.h library is used to help with plotting of encoded & scrambled signals.

3. How to run the code?

Modern C++ doesn't support graphics.h because it only works on 32 bit compiler.

First, download a 32-bit compiler(egTDM-GCC) and install it. Then download graphic.h library modules and paste them at the place of install of C++ compiler under lib folder.

Now, link the compiler with 32-bit installed compiler by changing linker settings.

Include <graphics.h> in code and we are good to go.

4. References

GEEKSFORGEEKS, YOUTUBE, STACKOVERFLOW, WIKIPEDIA, GRAPHICS.H DOCUMENTATION (BGI).

5. Acknowledgement

Ms. Iqra Gillani (Course Instructor).